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MEANS OF SECRET COMMUNICATION IN ANCIENT ARMIES.

BY H. CURLING, H. P. 52D.

The extraordinary means by which the warriors of the olden time contrived to communicate with each other whilst cooped up and surrounded by their adversaries in the beleaguered city or the tented field, will be found, on perusal of those old worm-eaten works wherein such contrivances are dilated on, well worthy of the contemplation of the curious in military matters.

It is my purpose in this paper to set forth some of the practices the "old soldier" resorted to when war (less civilized than in later days) was a war of extermination. At the same time, it was the business of life, and harness of proof "your only wear." In those days of iron men, then, it would appear that a considerable deal more ingenuity was wont to be displayed than is either customary or at all necessary in our own times; and the means used by the ancients to communicate their intentions, necessities, and perils, to their advancing or distant allies, so contrived, in many instances, that if, by adverse circumstances, the messenger and his letter happened to be intercepted, the communication being artfully worded, although it failed in the immediate purpose in hand, it yet might serve the turn of misleading the foe; by which means, when so completely blocked up and surrounded by fierce and savage foes, that (unless the bird of the air could take their message in his flight, or the blind mole burrow with it through the firm-set earth) their case seemed altogether hopeless, they have yet managed, by some swift and secret intelligence, either to obtain a diversion in their favor, or gain assistance from their friends.

For example, an alphabet having been agreed upon among the host, ere separated and detached in a hostile country, with the letters so marked, or varied, as to be understood by themselves alone, it was frequently the custom of the ancients, in their extremity, to write that which, on being unluckily intercepted, would, as I have before said, although it failed in obtaining them the succours or assistance they required, at least mislead their enemies as to their real situation.

No. 1.—INVOLVED EPISTLES OF THE ANCIENTS.

In the first place, then, we will exemplify the means resorted to in very early times of writing a letter with the help of two alphabets—the letters of which were so nearly similar, that, unless previously agreed on and fully comprehended by the allies, it was almost impossible to detect the involved meaning of the scrawl.

1ST AND 2ND ALPHABETS.

a b c d e f g h i k l m
a b c d e f g h i k l m
n o p q r s t u v w y z
n o p q r s t u v w x y z

Now, if by these alphabets we write the following letter, it will be found to answer the purpose described above.

FROM THE BESIEGED.

Wee prosper still in our affair*es* and *sh*all *with*out *hauing* any further *helpe* endure the seige.

Giving, (as mentioned,) in case of being intercepted, a false account of prosperous times and full granaries, where, in truth, there was nothing but "a bare-ribb'd death" in prospect; for if the letters of the second alphabet be picked out of this smiling and confident epistle, the situation of the garrison will be fully described, with military brevity sufficient to satisfy the great captain of our own times—

Wee perish with hunger helpe us.

Another way of secret writing, was to express all the letters by any five of them doubled; for instance, A B C D E doubled into the following alphabet—

A B C D E F G H I K L M
aa ab ac ad ae ba bb bc bd be ca cb

N O P Q R S T V W X Y Z
cc cd ce da db dc dd de ea eb ec ed

&c. By which contrivance, that which appeared an incomprehensible jumble of letters, "signifying nothing," if intercepted, might convey a certain and true account of the situation or wants of the besieged; for instance, "I am betrayed," may be thus written:

Bd aa cb ab ae dd db aa ec ae ad
I a m b e t r a y e d

On reference to the alphabet above, this will be easily and plainly made out. Certes, it is an epistle to which the caution of Hamlet need not be given—namely, "Give it an understanding, and no tongue;" since I defy the inventors of the unknown tongues of more modern times to syllable it forth, however easily they might comprehend it.

Again, three letters being transposed through three places were also used thus:

A B C D E F G H I K L M
aaa aab aac baa bba bbb bbc caa cca ccb ccc aba

N O P Q R S T U V W X Y Z
abb abc aca acb acc bca bcb bcc bce bab cba cbb cbc

By which means, supposing the besieged to wish for the rapid advance of their friends, upon any sudden emergency, they might write it thus:

caa aaa bca bcb bba abb bcc abb bcb abc aba bba
Hasten unto me.

Two letters being transposed through five places may be also supplied—

A B C D E F G H
aaaaa aaaab aaaba aaabb aabaa aabab aabba aabbb
I K L M N O P Q
abaaa abaab ababa ababb abbaa abbab abbba abbbb
R S T V W X Y Z
baaaa baaab baaba baabb babaa bababb babba babbb

From which, for instance, write to your friends, and tell them to cut their sticks after this fashion—"with what flourish your nature will," as the immortal has it—

aabab ababa babba aaaaa babaa aaaaa babba
F L Y A W A Y

Suetonius mentions that Julius Cæsar, when he wished to convey a private message, was sometimes wont to write it by making one letter stand for another; D for A, E for B, and so following, according to this alphabet:

d e f g h i k l m n o p q r s t u w x y z a b c
a b c d e f g h i k l m n o p q r s t u v w x y z

By which invention, if he wished to say, "Hasten unto me," he wrote it thus:

L d w x h q y g x r p h.

The same author says that Octavius Augustus pursued a similar plan, setting down the second letter for the first, as B for A, C for B, and for A, XX. This again they rung the changes upon, and still further obscured.

Notes of secrecy and abbreviation in writing, as used by the Romans, are treated on by Valerius Probus. Cicero and Seneca are also said to have been among the first who invented some of these means of communication.

No. 2.—Artifices used for Delivery of Letters.

The artifices, also, that the warriors of the olden time resorted to for the conveyance of these mysterious epistles will be found as well worthy of notice as the letters themselves. Some, for instance, have been put into the hands of men, who, being boxed up in coffins, have been sent away as dead; others, again, have been fain to take on them the disguise and semblance of animals, as mentioned by Josephus, when, during the seige of Jotapata, soldiers were ordered to creep out of the city by night in the likeness of dogs. The Council of Ephesus, again, when Nestorius was condemned, being strictly debarred from all ordinary ways of conveyance, were fain to send to Constantinople by one disguised as a beggar, "ragged as Lazarus in the painted cloth."

Letters have also been conveyed by men to their imprisoned friends in the food they were to receive; and among other stories related, there is one of a person rolling up his letter in a wax candle, and desiring the messenger to tell the party who received it that the candle would give him light for his business. Harpagus, the Mede, when he wished to exhort Cyrus to conspire against the king, his uncle, and being suspected so much that his every motion was jealously watched by "servant's feed," managed yet to evade these dogged spies, and one day, while hunting, contrived to stow away his letters in the belly of a hare, and delivering them, together with his nets and other implements of the chase, to a trusty messenger, they were thus safely conveyed to Cyrus; by which adventure, Astyages was betrayed of his kingdom.

Demæratus, king of Sparta, also, while "eating the bitter bread of banishment," being received at the Persian court, became aware there of the designs of Xerxes against Greece; upon which he immediately set his wits to work in order to advertise his countrymen of the mighty preparation. For this purpose, writing his epistle upon a tablet of wood and covering the letters with wax, it was in that form conveyed safely to the magistrates of Lacedæmon, who, on its receipt, although they had a shrewd suspicion that it "meant mischief," were for a long time unable to pluck out the heart of its mystery, till at length the king's sister, on its being shown her, picked off the wax and discovered the writing.

The leaves of plants and trees were also made use of for the purpose of writing on, and being covered over some sore or ulcer, were thus carried and secretly delivered.

Among, however, the most extraordinary of these kinds of inventions, is one told of Hystiæus, who, while with Darius in Persia, (being in communication with Aristagoras in Greece,) desired to send him a secret message upon the subject of revolting from the Persian Government. For this purpose, he undertook the cure of one of his household servants troubled with sore eyes; and persuading him of the necessity of having his head shaved and scacrified, (no bad remedy by the way,) during the operation, he took an opportunity of writing his intentions on the man's head. After which, keeping him confined for some days till his hair was somewhat grown, he desired him then (in order that he might be perfectly cured,) to travel into Greece, and present himself before Aristagoras, who, by shaving his head a second time, would certainly restore his vision.

When, again, it has been found impossible to communicate by land during a seige, the ancients have made the effort by water, by means of thin plates of lead fastened to the arms and thighs of expert swimmers. Lucullus is said to have communicated his approach to a beleaguered town, by sending a common soldier, disguised like some strange fish, and who, having his letters concealed in two bladders, by their help (being an expert swimmer,) he managed to reach his destination.

Pigeons, and swallows even, were used in early times to carry a letter. "The bird of the air will carry the clatter, and pint stoups hae lang lugs," quotes one of Sir Walter's characters.

Arrows, also, have carried intelligence: indeed, we are told of one which, being labelled for Philip's right eye, hit the mark; by which we might, if we liked, go so far as avouch the oldness of the saying, "There you go with your eye out," but that we have no voucher for the fact. The missiles, even cast from slings, in very early times, had billets attached to them. Cleomenes, king of Lacedæmon, during the seige of Trezerne, ordered his soldiers to shoot several arrows over the walls, with notes attached, containing the words—"I come that I may restore this place to liberty." Upon which, the over-credulous

inhabitants, discontented withal, opened their gates, and allowed his power to enter.

In short, the highest walls, the deepest moats, rivers, and trenches, guarded by the most watchful sentinels, have been insufficient to baffle the wit of a determined foe.

'Tis not the roundure of your old-fac'd walls
Can hide you from our messengers of war.

No. 3.—Beacons, Signals by Smoke, by Fire, and by Torches, &c.

The practice of giving information by lighting fires in the night, and by sending up volumes of smoke by day, is of greater antiquity than the other secret inventions I have mentioned, since such practices are said to have been in use in the Trojan wars. Be that, however, as it may, they are frequently mentioned by the ancient historians.

Appian, speaking of Scipio at Numantia, mentions that he divided his camp into divers companies, and gave orders to the Tribunes who commanded each party to signalize any attack that was made upon them, by fires if in the night time, and by a red flag of cloth by day. "Si impeterentur ab hoste, de die, panno rubro in hastu sublato. significarent, de nocte, igne."

Vegetius also affirms that it was customary when the host was divided to communicate in the day by smoke, in the night by fires.

Torches shaken betokened the approach of the enemy; held still, they signified the advance of friends.

Polybius dilates upon a plan of this sort. "Let there be" he says "five columns, or tablets, drawn thus, with letters thus divided:

	1	2	3	4	5
1	a	f	l	q	w
2	b	g	m	r	x
3	c	h	n	s	y
4	d	i	o	t	z
5	e	k	p	u	

"Provide then ten torches, five being on the right and five on the left. Hold up so many torches on the right hand as show the number of the tablet, and so many on the left as will display the number of the letter therein. For instance, if you mean to say *Hasten*, it may be thus signified:

The right hand.		The left hand.
II.	H	3
I.	A	1
IV.	S	3
IV.	T	4
I.	E	5
III.	N	3

"That is, two lights on the right hand show the second column, and, at the same time, three at the left denote the third letter in that column, H. A single torch discovered on both sides signifies the first letter of the first column, and so on for the remainder. There are various changes in this sort of torch-light communication; but the above is sufficient to show how the thing was managed."

The signals by smoke, in the day time, were not quite so distinctly made out, though the contrivances were various and ingenious. Funnels, for instance, were used for the purpose of dividing and conveying the smoke in the order it was intended to mount into the air, so as to be seen at a great distance; and doubtless many of the unregarded beacons and nameless barrows which are to be seen upon the blasted heaths and wolds of our sceptred isle could tell an interesting tale of fearful musters and prepared defence, when "fire answering fire, each battle showed the other's umber'd face." In former times, too, it is said the Chinese were in the habit of corresponding by smoke in the day, and by fire in the night, even for common purposes; so that when any strangers happened to be cast on their shores, they were examined by a watch or guard, who was kept for the purpose, and who not only communicated their business, number, and the commodities they brought, but also received for answer what was to be their fate, if enemies, and whether they were to be admitted or dismissed, if friends.

No. 4.—Intelligence by Birds, by Sounds, by Running Footmen, &c.

The practice of swift and secret conveyance by pigeons is of very great antiquity, since it is mentioned in history that Hircius the Consul, during the siege of Mutina, carried on a secret correspondence with Brutus, by tying his letters "unto such pigeons as were taught beforehand to fly from the camp to the city and back again." Thaurosthenes also sent the news of his victory at Olympia, to his father at Egina, by a pigeon, 'tis affirmed. Anacreon gives us an ode upon such a pigeon:

Gentle pigeon, hither, hither
Fly, and tell me whence or whither
Thou art come, or thou art winging,
Such sweet incense round thee flinging.

It was usual for the Roman magistrates, (says Lypsius,) when they went to the theatre, or other public meeting, whence they could not return at pleasure, to carry a pigeon with them, in order that, if any unexpected or untoward event should happen, they might give warning to their friends and families at home.

The attendance of running footmen is also of considerable antiquity. Alexander the Great was usually attended by these messengers; and it is related of two of them, Anistius and Philonides, that they ran 1,200 stadia in a day. It is also related of a boy amongst the Romans, who, being but eight years old, ran five-and-forty miles between sunrise and sunset.

Dromedaries, camels, and mules were also in common use in early times for carrying messages; and the custom of riding post, by renewing both horse and man at certain stages, is said by Herodotus to have been made use of by Xerxes in the Grecian war.

Swallows are said by Pliny to have been sent to Rome as intelligencers of a battle fought and won, being anointed all over with the color of victory.

Sounds and reports of cannon and musketry, the roll of the drum, and the blowing of horns, have been made use of by agreement, so as to express, 'twixt friend and friend, some sign or signal of distress or necessity, and even letters and words distinctly given. Suppose, for instance, the word *Victuals* were to be

sounded; let the bigger sound be represented by A, and the lesser by B, when, according to the table I have before given, in which two letters of the alpha bet are transposed through five places, the word may be thus made:

baabb	abaaa	aaaba	baaba	baabb	aaaaa	ababa	baaab
V	I	C	T	U	A	L	S

That is, the lesser note sounded once and then the bigger twice, after which the lesser again twice, gives the V, *baabb*. So the larger once, the lesser once, and then the larger thrice, represents the letter I, *abaaa*. (See page 547, for alphabet.) This, however, will seem the less curious from our own more modern practice in the light infantry manœuvres.

Cambden, in speaking of the Roman wall built by Severus in the north of England, and which he says was above a hundred miles in length, affirms that its towers, which were more than a hundred in number, and situate a mile apart, were so contrived that, by means of hollow pipes in the curtains of the wall, the defendants could presently inform one another, from tower to tower, of any thing necessary to be told regarding the intended assault of the foe; and, even long after the total ruin of this wall, there were many inhabitants of those parts who held their lands by a tenure in cornage; that is, they were obliged, by blowing a horn, to discover the advance of hostile forces. The ringing of bells I need hardly mention, since that species of alarum is to this day used by the timorous in their dwelling-houses, even in our own peaceful times.

No. 5.—Hieroglyphics.

Amongst these ancient customs and inventions it may be as well to glance at hieroglyphics, which were, perhaps, in use before any I have yet mentioned; the Egyptians using these curious symbols on their pillars, obelisks, pyramids, and monuments, before the invention of any other sort of writing. Thus by a bee they represented a king, intimating that he should be industrious, gather honey, and bear a sting; a serpent, with his tail in his mouth, signified the year, which returns into itself; and so forth.

Darius, during his war with the Scythians, received as presents a bird, a mouse, a frog, and a bundle of arrows, which gifts were meant to intimate, that unless the Persians could fly as birds, dive under water like frogs, or live in holes in the earth as mice, they need scarce hope to escape the Scythian arrows.

No. 6.—Varieties of Epistolatory Correspondence.

To return to the subject of communication by secret writing, there are several modes of doing so besides those shown in the commencement of this paper; amongst others, it was not uncommon, with the Eastern leaders, to write from the right hand to the left, or from the top to the bottom, and so upwards again. For instance:

e r f d l e e l l t
i e t o o s w i i h
l s u u h h s n t e
p h o t o a v c s p
p a h t t l t r h e
u n t h e l s e t s
s d i e l n g a o t
y s w e b o n s d i
d p e i a t o e c l
e e g e e b m a n e

Begin this at the first letter towards the right hand, and so downwards, and then up again, and you will find this lamentable situation expressed:

The pestilence doth still increase amongst us wee shall not be able to hold out the siege without fresh and speedy supply.

Again, the order both of the letters and lines were sometimes altered thus:

T e o l i r a e l m s f m s e s p l v o w e u t e l
h s u d e s r a l o t a i h d u p y s r e m s y i d

The souldiers are allmost famished supply us or we must yield.

Another mode was by inversion; when either the letters or syllables are spelled backwards, as in the following:

Mitto tibi *metulas* caneros imitare legendo.

In this the word *salutem* is expressed by inversion of the letters. Again:

Stisho estad, vecabiti.

Which, by inversion of the syllables, gives us,

Hostis adest, cave tibi.

It was also customary amongst the ancients to write with various kinds of juices, and otherwise endeavor, by the material or liquor with which they inscribed their epistles, to evade the prying eyes of their enemies. Putrified willow and the juice of glow-worms being mentioned, as also milk, urine, fat, and other glutinous liquors, which were made legible upon being powdered with dust. Attalus is said to have made use of some such method when, before giving battle to the enemy, and intending to sacrifice to the gods for success, he pulled out the entrails of the beast, and impressed upon them the words *Regis victoriæ*, having beforehand written them backward in his hand with some thick and glutinous matter he had prepared for the purpose; so that the entrails, on being tumbled about by the priest, in order to find their signification, gathered so much dust that the words were distinctly legible. After which omen, the soldiers advanced with such spirit and confidence that they won the day.

Dover.—Few persons are perhaps aware that our harbor commissioners have determined upon making the most extensive alterations and improvements for widening and generally enlarging the harbor; so extensive, no doubt, as to leave it beyond a matter of question that the Government intend making Dover harbor one of refuge. All the "old buildings," including the Dover Castle Inn, Amherst Battery, and the warehouses and buildings occupied by Messrs. Gilbee, Norwood, Spice, Dennis, Clarke, and others, are to be pulled down, and their sites thrown into the harbor. The whole of Union street also is to come down, with the exception of Messrs. Latham's Bank and the York Hotel. The railway will clear away Beech street, the whole of the South Pier houses, and a part of Seven-star-street, which will include nearly all the shipwrights in Dover, not even excepting Mr. Duke, whose residence will also come down. These changes must have an extraordinary effect on all the trades of Dover, who will speedily be called into action for the purpose of supplying the "houseless wanderers" with places wherein to hide their heads.—*Dover Telegraph.*

Enormous Steam-frigate.—An English paper received by the Columbia gives the following description of the *Penelope* steam-frigate:

"The Penelope, which was one of the old 46-gun frigates, built after the French Hebe class, and which has recently been lengthened and converted into a steam-frigate, will be undocked at Chatham on the 29th instant, and towed to the river to Messrs. Seaward's to receive her engines, which are now ready. She was originally 152 feet long, and is now 216, having been lengthened 65 feet in midships. She is to have two engines upon the new direct or Gorgon principle, of 650 (collective) horse-power. She will be able to stow 500 tons of coals in her boxes, and 100 tons elsewhere, sufficient fuel to last her fifteen days. Her armament will consist of two 10-inch guns, and ten 32-pound carronades on the quarter-deck and forecastle, and eight 68-pounders of 65 cwt. each, on the main deck. Her complement will be 300 men; in addition to which, she will have sufficient room and accommodation to carry with convenience a whole regiment of soldiers, and convey them to the Cape of Good Hope in about thirty days. When she has taken her engines on board, she will return to Chatham to be fitted with her masts, yards, and spars. She will be ship-rigged, and spread as much canvas as she did originally as a frigate. She will have the wire-rope rigging, and will have Captain Smith's paddle-box boats. It is expected she will be ready for sea by the middle of June."

Quarrying Stones.—Another remarkable example of the contributions of science to the arts of life is derived from the properties of heat, as applied in the east to quarrying blocks of stone, when the object is to excavate huge blocks from the surrounding mass. A groove is cut some two inches in depth in the required direction; this done, the groove is filled with fuel, which is kept lighted until the rock is highly heated. The rock then is, of course, expanded by the action of the heat; the fuel is then swept away, and cold water immediately poured into the groove. The sudden contraction causes the block instantly to split off. The same principle is daily exhibited on our tables. If a heated glass be suddenly filled with cold water, it immediately breaks in pieces. In this way blocks eighty feet long and six thick are easily taken off with no other labor than that of chiselling out the groove. A similar example of the application of science to the economy of power is exhibited in France in the quarrying of millstones. They are required, as you are well aware, to be circular and flat—cylinders with a very small altitude compared with the diameter—and the stone from which they are made is exceedingly hard. The mode of quarrying them is this: a very high circular column of stone is wrought out of the requisite diameter. To slice off portions of this, such as are required by the common stone saw, would be a work of immense labor. A quite different agent is employed. At regular successive distances grooves are cut around the column, into which are driven dry wooden wedges at evening. The dew which falls during the night being absorbed by the wood, causes it to expand with a power so irresistable, that all the stones are found properly cracked off in the morning.—*Dr. Lardner.*

Burning Lens worked by the Drummond or Oxy-Hydrogen Light.—A colossal burning lens, three feet in diameter, and weighing five hundred weight, has been erected in the Royal Adelaide Gallery, intended to be worked by the Drummond or oxy-hydrogen light. Some private experiments of this power of the Drummond light have taken place, when it was found that the bulb of a differential thermometer introduced into the focus, at a distance of sixteen feet, was sensibly affected, and a piece of phosphorus introduced in the same point was fused. It has long been asserted that the heat accompanying light obtained by artificial means does not produce heat capable of being transmitted and concentrated through lenses; these experiments fully prove the contrary.

Timber Tank.—A wrought iron cylinder, fifty-one feet long and six feet diameter, has been erected in Portsmouth Dock Yard, for the purpose of "burnettizing" timber under pressure. It is composed of plates half an inch thick, and double rivetted, and the ends are of cast iron, with doors two feet six inches square, for the admission of logs. It is fitted with two air pumps of fourteen inches diameter, for extracting the air, and two force pumps for increasing the pressure when filled with the solution. On a trial lately made before the admiralty engineer, Mr. Kingston, the cylinder having been charged with twenty loads of timber, the air pumps which are arranged to be driven by Lord Dundonald's rotary engine, were set to work, and a vacuum of twenty-six and a half inches was obtained in thirty minutes. A cock in the connecting pipe was then opened, and the solution rushed into the vacuum from the cistern. When the cylinder was filled with the solution, the force pumps were set to work, and the pressure was raised to two hundred pounds on the square inch. Under this pressure there was not the slightest leakage from any part of the cylinder, nor from the doors. The timber was removed on the following day, and a log was cut up, when it was found that the solution had penetrated to the very centre, and completely saturated it. The pressure at which the apparatus is in future to be worked, is one hundred pounds on the square inch, as this is found to be sufficient for the due saturation of the timber within twenty-four hours, under the process of previous exhaustion of the air. The whole of the work was executed by Messrs. W. Fairbairn & Co., of London, and the cylinder rivetted up by their patent rivetting machine, to which its great tightness may be attributed.

The New Barracks at Preston.—We understand that the plans and specifications for the new barracks at Fulwood, near Preston, have at length passed, and received the confirmation of the Hon. Board of Ordnance. They will be on the most magnificent and complete scale, superior to any in the kingdom, to accommodate 2,000 men, with stabling for 750 horses.—*Preston Chronicle.*

EFFECT OF OIL IN STILLING WAVES.

Among the statements made by Pliny, in his "Natural History," eighteen centuries ago, was one which has obtained but little credit until modern times, although now no longer doubted. It relates to the effect of a thin stratum of oil in stilling waves. Pliny mentions this property as having been known to the divers of his time; they poured a little oil on the surface of the water, in order that, by stilling its ripplings, the rays of light might be better able to penetrate to the bottom. About seventy years ago the subject was much discussed by several fellows of the Royal Society, including Dr. Franklin; and subsequent inquiries have shown that the property in question is familiarly known to maritime men in different countries. We will first enumerate a few facts collected from various quarters; and then describe some experiments which Franklin made on the subject.

Sir Gilfred Lawson, who served in the British army at the defence of Gibraltar, told Dr. Brownrigg that the fishermen of Gibraltar were accustomed to pour a little oil on the sea, in order to still its motion, that they might be enabled to see the oysters lying at its bottom; Sir Gilfred had often seen this done. Dr. Franklin was informed that many of the divers on the coast of Italy were accustomed to take a little oil in their mouths before they dived; when they had descended to a certain depth, they allowed the escape of the oil, which, rising to the surface by virtue of its lightness, spread in a thin film, which smoothed the water-ripples, and allowed light to descend to a considerable depth. The fishermen of Lisbon, when about to return into the river, if they saw before them too great a surf upon the bar, were accustomed to empty a bottle or two of oil into the sea, to still the breakers. Sir John Pringle was informed that the persons employed in the herring fishery off the coast of Scotland could see at a distance where the shoals of herrings were, by the smoothness of the water over them, occasioned, as he supposed, by some kind of oiliness proceeding from the bodies of the fish. It has been observed by the seal-catchers on the coast of Scotland, that when these animals are devouring a very oily fish, which they do under water, the waves above become remarkably smooth.

A passenger to the Eastern Ocean, in a Dutch ship, in the year 1770, wrote a letter to a Count Bentinck, in which the following statement was given: "Near the islands Paul and Amsterdam we met with a storm, which had nothing particular in it worthy of being communicated to you, except that the captain found himself obliged, for greater safety in wearing the ship, to pour oil into the sea, to prevent the waves breaking over her; which had an excellent effect, and succeeded in preserving us. As he poured out but a little at a time, the East India Company owes perhaps its ship to only six demi-aumes of olive oil. I was present upon deck when this was done; and I should not have mentioned this circumstance to you, but that we have found people here so prejudiced against the experiment, as to make it necessary for the officers on board, and myself, to give a certificate of the truth on this head; of which we made no difficulty."

The incident which first drew Franklin's attention to this subject he thus narrates: "In 1757, being at sea in a fleet of ninety-six sail bound against Louisbourg, I observed the wakes of two of the ships to be remarkably smooth, while all the others were ruffled by the wind, which blew fresh. Being puzzled with the differing appearance, I at last pointed it out to our captain, and asked him the meaning of it. 'The cooks,' said he, 'have, I suppose, been just emptying their greasy water through the scuppers, which has greased the sides of those ships a little!' and this answer he gave me with an air of some little contempt, as to a person ignorant of what every body else knew. In my own mind I at first slighted his solution, though I was not able to think of another."

Franklin, however, was not a man to let such an inquiry drop till he had arrived at some satisfactory conclusion. He conversed with maritime persons on the matter, and found that the effect of oil in stilling waves was known to many of them. He resolved, therefore, to make experiments for himself, and selected a pond on Clapham Common as the locality. He dropped a little oil in the water, and says, "I saw it spread itself with surprising swiftness upon the surface, but the effect of smoothing the waves was not produced; for I had applied it first upon the leeward side of the pond, where the waves were largest, and the wind drove my oil back upon the shore. I then went to the windward side, where they began to form; and there the oil, though not more than a tea-spoonful, produced an instant calm over a space several yards square, which spread amazingly, and extended itself gradually till it reached the lee-side, making all that quarter of the pond, perhaps half an acre, as smooth as a looking-glass." He describes the film of oil as being reduced to such extreme thinness as it spread, as to give out the prismatic colors, and afterwards to be quite invisible except in relation to the stilling effect which it produced.

After this experiment, Franklin adopted an expedient quite characteristic of his untiring love of inquiry into natural phenomena; he contrived to hollow out the upper joint of his bamboo walking-stick, and put a little oil in it whenever he was going into the country; he was thus enabled to repeat the experiment many times, and always produced similar results. During a visit which he afterwards paid to the celebrated Smeaton, Franklin was told by a Mr. Jessop, a pupil of Smeaton's, that having thrown into some water a few flies which had been drowned in a cup containing oil, he was suprised to see the flies presently begin to move and rotate rapidly on the water, as if they were alive, though on examination he found them to be quite dead. Franklin had before observed that the oil on the surface of water seems to be endowed with a kind of repulsive action among its particles, which acted also on any light substances, such as straws, leaves, or chips floating on the surface; and he conceived that the flies rotated in consequence of a repulsion exerted as the oil oozed from their bodies. He showed that organized structure had nothing to do with the matter, for he produced similar movements by placing on the surface of water small oiled chips cut into the form of a

comma (,)—as the oil issued from the point of the comma, the chips began to rotate.

The explanation which Franklin offered of the sedative effect of the oil upon waves is very ingenious. Air, when in motion, in the shape of wind, over the surface of smooth water, probably *rubs*, as it were, on that surface, and raises it into wrinkles, which, if the wind continues, are the elements of future waves. The smallest wave, once raised, does not immediately subside and leave the neighboring water quiet; but in subsiding raises nearly as much of the water next to it, in the same way as a stone dropped into water raises a series of concentric waves around it. As a small power continually in operation will produce a great effect, so the small first-raised waves, being continually acted on by the wind, are, though the wind does not increase in strength, continually increased in magnitude, rising higher and extending their basis, so as to include a vast mass of water in each wave, which in its motion acts with great violence. This being the mode in which ordinary waves are formed, Franklin conceived that when oil is poured on the surface of water, and retained there by its smaller specific gravity, there is a repulsive power which drives the particles of oil one from another, extending them into a film of the greatest possible tenuity. "Now," says he, "I imagine that the wind blowing over water thus covered with a film of oil cannot easily *catch* upon it, so as to raise the first wrinkles, but slides over it, and leaves it smooth as it finds it. It moves a little the oil, indeed, which, being between it and the water, serves it to slide with, and prevents friction, as oil does between those parts of a machine that would otherwise rub hard together. Hence the oil dropped on the *windward* side of a pond proceeds gradually to leeward, as may be seen by the smoothness it carries with it, quite to the opposite side; for the wind being thus prevented from raising the first wrinkles, that I call the elements of waves, cannot produce waves, and thus the whole pond is calmed."*

Franklin's practical turn of mind led him to conjecture whether this principle might not be applied where voyagers, desirous of landing at any particular shore, are prevented from so doing by a violent surf which breaks on the shore. His idea was, that, by sailing to and fro at some distance from a lee shore, continually pouring oil into the sea, the waves might be so much depressed and lessened before they reached shore, as to abate the height and violence of the surf, and permit a landing. Assisted by Sir Joseph Banks, Dr. Blagden, and Dr. Solander, Franklin made an experiment on this point at the entrance of Portsmouth harbor, nearly opposite Haslar Hospital. A party left a ship, in the long-boat, and took up a position a quarter of a mile from the shore, with a wind blowing towards shore; another party were in the barge at double that distance from the shore; while a third party watched the effects from the shore itself. The experimenters in the barge made trips to and fro, of about half a mile each, parallel with the shore; pouring oil continually out of a large stone bottle, through a hole in the cork somewhat larger than a goose quill. It was found that the height and motion of the waves were not materially lessened; but the persons in the long-boat could observe a tract of smoothed water, extending the whole length of the distance in which the oil was poured, and gradually spreading in breadth from the track of the barge towards the long-boat. This portion of sea was not levelled, but it was free from the small wrinkles usually observed on the waves themselves, and also totally free from the foam exhibited in similar situations. The men in a sailing-boat, which happened to be passing that way, purposely chose that tract which had been smoothed by the oil, as being more calm and easy of navigation. Although, therefore, the oil had not the effect of destroying the waves themselves, it reduced them to calm and gently swelling undulations. When the wind blows fresh, there are continually rising on the back of every great wave a number of small waves, which roughen its surface, and give the wind a kind of hold or purchase to push it with greater force. It seems pretty evident that oil, although it cannot stop powerful waves already formed, which acquire a power of oscillation totally independent of the continuance of the wind, will prevent the formation of the subordinate waves which increase the bulk and force of the former.

We are not aware whether any recent attempts have been made to apply this curious principle to any useful purpose.—*Penny Magazine.*

* "Phil. Trans.," vol. lxiv.

Cast-Iron Buildings.—Buildings of cast-iron are daily increasing at a prodigous rate in England, and it appears that houses are about to be constructed of this material. As the walls will be hollow, it will be easy to warm the buildings by a single stove placed in the kitchen. A three story house, containing ten or twelve rooms, will not cost more than £1100, regard being had to the manner in which it may be ornamented. Houses of this description may be taken to pieces, and transported from one place to another at an expense of not more than £25. It is said that a large number of cast iron houses are about to be manufactured in Belgium and England, for the citizens of Hamburg, whose habitations have been burnt.

News from Sir J. Ross.—Intelligence has just been received by Lieutenant M'Murdough, of the Terror, from Captain J. C. Ross, who has, it appears, penetrated the Antarctic Circle to 71° 41′. He has surveyed the coast discovered by him along its western boundary, and has proceeded to do the same along the eastern line.—*Falmouth Packet.*

Important Discovery.—The Hamburg schooner Paradise, Captain Zybrandts, on July 18, 1841, on a voyage from Valparaiso to Manilla, discovered a group of six islands, thickly studied with cocoa-nut trees, and supposed uninhabited, in lat. 9 S., long. 172 W. of Greenwich, (supposed not laid down in any charts.) The captain named them Paradise Islands. The latitude of the northernmost island, at noon, was made 9 deg. 20 min. 6 sec. S., and the long., by good chronometers, 172 W. The Uloe Group is laid down in the English charts 23 min. too southerly and westerly of those islands, being in lat. 7 32 N., long. 143 30 E.

Domestic Miscellany.

BATTLE AT GREAT BRIDGE, VIRGINIA, DECEMBER 9, 1775.

From officers who have arrived in town from Colonel Woodford's camp since the battle of the Great Bridge, I have, I think, collected a more particular account of that action than any which has yet been communicated to the public. You will therefore oblige me by publishing it, and perhaps afford, at the same time, no disagreeable entertainment to our countrymen. As the scene of action is but little known to the generality of people, it may be necessary to give some description of it, that the relation may be more clear and satisfactory. The great bridge is built over what is called the southern branch of Elizabeth river, twelve miles above Norfolk. The land on each side is marshy to a considerable distance from the river, except at the two extremities of the bridge, where are two pieces of firm land, which may not improperly be called islands, being surrounded entirely by water and marsh, and joined to the main land by causeways. On the little piece of firm ground on the farther, or Norfolk side, Lord Dunmore had erected his fort, in such a manner that his cannon commanded the causeway on his own side and the bridge between him and us, with the marshes around him. The island on this side of the river contained six or seven houses, some of which were burnt down (the nearest to the bridge) by the enemy, after the arrival of our troops; in the others, adjoining the causeway on each side, were stationed a guard every night by Colonel Woodford, but withdrawn before day, that they might not be exposed to the fire of the enemy's fort in recrossing the causeway to our camp, this causeway being also commanded by their cannon. The causeway on our side was in length about one hundred and sixty yards, and on the hither extremity our breastwork was thrown up. From the breastwork ran a street, gradually ascending, about the length of four hundred yards, to a church, where our main body were encamped. The great trade to Norfolk in shingles, tar, pitch, and turpentine, from the country back of this, had occasioned so many houses to be built here, whence these articles were conveyed to Norfolk by water. But this by-the-by. Such is the nature of the place as described to me, and such were our situation and that of the enemy. On Saturday, the 9th instant, after reveille beating, two or three great guns and some musketry were discharged from the enemy's fort, which, as it was not an unusual thing, was but little regarded by Colonel Woodford. However, soon afterwards he heard a call to the soldiers to stand to their arms; upon which, with all expedition, he made the proper dispositions to receive the enemy. In the mean time, the enemy had crossed the bridge, fired the remaining houses upon the island, and some large piles of shingles, and attacked our guard in the breastwork. Our men returned the fire, and threw them into some confusion, but they were instantly rallied by a Captain Fordyce, and advanced along the causeway with great resolution, keeping up a constant and heavy fire as they approached. Two field-pieces, which had been brought across the bridge and planted on the edge of the island, facing the left of our breastwork, played briskly at the same time upon us. Lieut. Travis, who commanded in the breastwork, ordered his men to reserve their fire till the enemy came within the distance of fifty yards, and then they gave it to them with terrible execution. The brave Fordyce exerted himself to keep up their spirits, reminded them of their ancient glory, and, waiving his hat over his head, encouragingly told them the day was their own. Thus pressing forward, he fell within fifteen steps of the breastwork. His wounds were many, and his death would have been that of a hero had he met it in a better cause. The progress of the enemy was now at an end; they retreated over the causeway with precipitation, and were dreadfully galled in their rear. Hitherto, on our side, only the guard, consisting of twenty-five, and some others, upon the whole amounting to not more than ninety, had been engaged. Only the regulars of the fourteenth regiment, in number one hundred and twenty, had advanced upon the causeway; and about two hundred and thirty tories and negroes had, after crossing the bridge, continued upon the island. The regulars, after retreating along the causeway, were again rallied by Captain Leslie, and the two field-pieces continued to play upon our men. It was at this time that Colonel Woodford was advancing down the street to the breastwork with the main body, and against him was now directed the whole fire of the enemy. Never were cannon better served; but yet, in the face of them and the musketry, which kept up a continual blaze, our men marched on with the utmost intrepidity. Colonel Stevens, of the Culpepper battalion, was sent round to the left to flank the enemy, which was done with such activity and spirit that a rout immediately ensued. The enemy fled into their fort, leaving behind them the two field-pieces, which, however, they took care to spike up with nails. Many were killed and wounded in the flight, but Colonel Woodford very prudently restrained his troops from urging their pursuit too far. From the beginning of the attack till the repulse from the breastwork, might be about fourteen or fifteen minutes; till the total defeat upwards of half an hour. It is said that some of the enemy preferred death to captivity, from a fear of being scalped, which Lord Dunmore inhumanly told them would be their fate should they be taken alive. Thirty-one, killed and wounded, fell into our hands, and the number borne off was much greater. Through the whole of the engagement, every officer and soldier behaved with the greatest courage and calmness. The conduct of our sentinels I cannot pass over in silence. Before they quitted their stations they fired at least three rounds as the enemy were crossing the bridge, and one of them, who was posted behind some shingles, kept his ground till he had fired eight times, and, after receiving a whole platoon, made his escape over the causeway into our breastwork. The scene was closed with as much humanity as it had been conducted with bravery. The work of death being over, every one's attention was directed to the succor of the unhappy sufferers; and it is an undoubted fact, that Captain Leslie was so affected with the tenderness of our troops towards

those who were yet capable of assistance, that he gave signs from the fort of his thankfulness for it. What is not to be paralleled in history, and will scarcely appear credible, except to such as acknowledge a Providence over human affairs, this victory was gained at the expense of no more than a slight wound in a soldier's hand;* and one circumstance which renders it still more amazing is, that the field-pieces raked the whole length of the street, and absolutely threw double-headed shot as far as the church, and afterwards, as our troops approached, connonaded them heavily with grape-shot.—*Virginia Gazette.*

Fort Monroe.—This is certainly the prettiest piece of workmanship in the science of military engineering that this country has yet produced, and we venture to say that it will vie with any thing of the kind which the Old World can exhibit. We shall reserve for another time a more particular description of a work so creditable to the scientific attainments and enlightened views of the American people, and at present merely awaken the attention of those to whom it has heretofore been an object of interest sufficiently attractive to induce a visit to it from the upper country during the summer. The turfed slopes of the battlements are now clad in the richest verdure, and the green vesture of nature generally covers the once arid and eye-paining surface of Old Point Comfort, save where it is diversified with neat dwellings, granite walls, and the wide moat, filled with limpid water, which surrounds them, and the eye can dwell with pleasure and without wearying on the vast objects and beautiful prospects which present themselves on every side.—*Norfolk Herald, May* 2.

Seamen for the United States Naval Service.—Since the 4th of March last, we learn that 42 seamen have enlisted at the naval rendezvous in Philadelphia; at Baltimore 56 since the 10th of March; at S. C., 105; and at New Orleans, 250. The number Norfolk, Va., 40 since the 1st of March; Charleston, shipped at New York and Boston we have not heard stated.

There is a cause for this marked popularity of our naval service, which seems not generally known. At the last session of Congress a law was passed giving to the seamen in the navy their "small stores," tea, sugar, coffee, &c., which heretofore they were obliged to purchase from the purser, at an advance of 25 to 50 per cent. on the first cost, equal to $1 50 per month put into the pocket of "Jack." The clothing is *now* supplied by the Government at nearly contract price, which is a saving to the seamen of $1 50 per month more, making an *increase* to his pay over former times of about $3 per month, which, added to his pay of $12 per month, makes it now equal to $15.

To this he may add $1 80 per month, which is allowed if he does not draw or drink the spirit part of his ration; so that if our seamen in the navy will be temperance men, their pay per month will be equal to $16 80.—*Phil. U. S. Gazette.*

* This was a second Bunker's Hill affair, in miniature, with this difference—that we kept our post, and had only one man wounded in the hand.—*Letter of Colonel Woodford.*

LOSS OF SHIP CADMUS.

We give below an account of the loss of the ship *Cadmus*, of Fairhaven, in 1842. This account was derived from Mr. A. Adams, of Fairhaven, owner of the Cadmus. We have examined the chart, and find within a short distance of the latitude and longitude, as given by the Cadmus, the Matilda rocks, on which the Matilda was lost in 1792, also Bligh's Lagoon Island, Hood's Island, not inhabited since 1791, and Corysford Island, also not inhabited. We think it not unlikely that all these islands are one and the same.

The island is represented by the Cadmus as 5½ by 2½ miles wide, in latitude 23 deg. 10 min. south, and longitude 137 deg. 20 min. west. It is uninhabited, is surrounded by a coral reef, fringed here and there with clumps of trees, and has a lagoon in the middle; the tide rises about 2½ feet. The following is the account given by Mr. Norton, the first mate:

On the night of the 3d of August, 1842, (civil account,) as we were steering E., with a fine breeze from S. S. W., at 11 P. M. I left the deck in charge of the 2d mate, directing him to have a good look out kept ahead, which he did. In about half an hour he came down and told the captain there was land in sight, off the lee bow. The captain, myself, and 3d mate went on deck as quick as possible, and to our great surprise found that we were not more than twenty rods from the breakers. The wheel was put down instantly; but in luffing we discovered breakers off our weather bow also, so that we were completely hemmed in by them. We then put the wheel up, but before the ship could pay off, she struck on a reef near the shore of a small island not laid down on any of our charts. We then let go the top-sail and top-gallant haliards, and sprung to the boats. The star-board and waist-boats were stove before they could be got clear of the ship. Taking a more favorable opportunity, I succeeded in getting my boat clear of the ship without material injury, with myself and six others in her, and thereby secured the only means of escape from that desolate island. After being in the boat about three hours, I picked up another man who had been swept by the current as much as two miles from the shore. In the morning I put in towards the ship, and found to my sorrow that she was a complete wreck—all of her spars gone by the board, spare boats stove, her bottom out, and every thing out of her, and the remainder of her hull driven up some distance on the reef. Finding a tremendous sea continually breaking over the wreck and reef on which she lay, I did not deem it prudent to attempt a landing at that place, as it was impossible to land without getting the boat stove, and but a small chance for any of us to get on shore without being badly bruised by the sharp coral rocks. I therefore pulled round to the lee side of the island, and landed upon the reef, (which I afterwards found encircled the whole island,) and hauled the boat on to the beach, which I found to be a very tedious job, as not one of us had a shoe to our feet, and the coral rocks were

so sharp as to draw blood at almost every step. After securing the boat, we all started for the wreck, a distance of about five miles. We reached it in about two hours, when we found that the remainder of the crew had got on shore, some of them being badly wounded by the coral, but none had their limbs broken.

The shore was strewn with the fragments of trunks, boxes, casks, broken spars, planks, &c.; nearly every thing being stove, except a few casks of bread and flour, and four or five casks of fresh water, the last being very acceptable, as the island did not afford any. After having secured every thing that we deemed would be of any service to us, we held a consultation upon what was best to be done. We finally concluded to fit the boat as well as we could, and try to find the island of Otaheite. Accordingly, on the 6th, every thing being prepared, we put to sea with thirty days' provisions, and a crew consisting of the captain, myself, and four others, without a chart, book, or any kind of nautical instrument, excepting a boat compass; all of our instruments having gone to pieces with the ship, leaving the rest of the crew on the island.

The reader may judge what were our feelings as we embarked, not knowing whether we should ever reach any place where we could gain assistance. For the first two days we had a head wind, which we supposed might prolong our voyage more than we at first expected; consequently we had to reduce our allowance of provisions to a smaller ratio. After the first two days we had the wind S., steering N. N. W., with squalls of wind and rain, which kept us constantly wet for two days and nights. On the 10th, 11th, and 12th, we had fine weather, with light breezes from S. to N. E., steering N. by W., in order to run out our latitude first, and then steer W. On the 13th we had strong breezes, with a heavy cross sea, which again kept us wet and uncomfortable; at night it was so rugged that we dare not run; we therefore made a floating anchor of two oars and a keg of water, and veered them out ahead so as to keep her head to the sea as much as possible. It was so rugged, however, that the sea now rolled in on both sides, threatening to swamp us every minute. Long and tedious were the hours that I watched on that night, and heart-sickening the thoughts of our condition.

On the morning of the 14th the weather was more favorable; we made sail and steered to the N. W., whilst some of us were employed in making a jib. I discovered land ahead; we ran near enough to see the natives on the shore, but dare not land, as we did not know what island it was. We proceeded on, steering N. W. On the 15th, judging ourselves far enough to the north, we steered west. On the 16th, we again saw land to the north; we veered around and ran for it. At about 10 o'clock we were near enough to see some cocoa-nut trees, and as we could not land on that side of the island on account of the breakers, we prevailed upon a Sandwich Islander whom we had with us, to swim on shore and procure some of the fruit, which he did. On returning, he reported that he saw a schooner on the other side of the island. We then went to the lee side of the island, and landed the captain and two men to go in quest of the schooner. They soon returned, after ascertaining it was nothing more than a native canoe. As we were shoving off from the shore, one of the natives (who followed them down to the boat) said there was a French brig lying at anchor on the opposite side of the island. After much persuasion we got him to come on board and act as pilot in our attempt to find the vessel, but without much hope of succeeding. It was with joyful hearts, therefore, that we hailed the first glimpse of her spars, as they peered above the tops of the cocoa-nut trees. At 8 P. M. we got alongside and gained the deck, with as light hearts as ever beat in the breast of man. On looking at the vessel's charts, we found, to our great surprise, that we were 3 deg. north of Otaheite, and 2 deg. to the west of where we supposed ourselves to be.

The island proved to be Touroa, the most northern of the group called the Archipelagos; had we passed this island probably we should never have reached any other, as there is none for a long distance on the track which we were steering. The brig belonged to Valderia. We tried to get the captain to carry us to Otaheite, but without success. We purchased of him a sextant, and drew off a part of one of his charts, for which we gave the mean Spaniard an order for our boat, payable at Tahiti. On the 17th we again put to sea, with a much better prospect of reaching the place of our destination. On the 18th we had fine weather and light trades; at 3 P. M. we passed another island of the same group; 19th, fine weather, steering to the S. W.; at night it came up squally with strong breezes, which again kept us wet all night. At about 12, midnight, we saw the long-wished for land. At 9 A. M. on the 20th we reached the shore of Otaheite, after a voyage of fourteen days, and sailing over a thousand miles in an open boat; here we met with a kind reception from all. On the 25th the schooner Emerald left Tahiti in quest of the remainder of the crew.

From the Sandwich Islands.—The frigate *United States* arrived at Oahu on the 4th December, and sailed on the 7th. Only nine were on the sick list, out of a ship's company of five hundred. The following is an extract of a letter, dated

Honolulu, *Dec.* 20, 1842.

An incident occured on the arrival of the *United States*, worthy of record, for the honor of the Governor of this Island. The frigate came to anchor outside the bar on Sabbath morning. Captain Armstrong immediately sent off a lieutenant to make the necessary arrangements for firing a national salute. The lieutenant, in company with the U. S. consul, called at the residence of Governor Kekuanaoa, but he was at church. A note was despatched informing him of the frigate's arrival, and that an officer was ready to make arrangements for a salute.

The Governor returned an answer that he was at divine service, and would attend to the business on the following day, at 9 o'clock, A. M. Hence the quiet of our Sabbath was not disturbed by the discharge of cannon on sea or land. I could not but contrast the conduct of Governor Kekuanaoa with

that of the commanders of most vessels-of-war, as well as most of the public men in many parts of Christendom.

Efforts are making on board the frigate in favor of temperance. The labors of the surgeons are unremitting in this good cause.—*Journal of Commerce.*

TEST OF STRENGTH OF POWDER.—A Washington correspondent of the New York Aurora gives the following description of an ingenious contrivance for testing the strength of powder, now in operation in this city:

There has been lately constructed at the national arsenal here a contrivance for testing the strength of powder by the recoil of heavy ordnance and the momentum of the shot, which is truly admirable in its way. I will try to convey to you some idea of this valuable invention. A 32-pounder is suspended by an iron pendulum ten or twelve feet long, at the top of which is a heavy bar of the same metal, the extremities of which rest upon smooth iron plates, which are sustained by strong abutments of stone. Underneath the gun is placed a segment of a circle, regularly graduated, upon which a piece of iron slides, the upper part coming in contact with the gun. When the cannon is discharged, this piece of metal is p ished, by the recoil, along the scale, and indicates exactly the extent of the vibration of the pendulum. Opposite the above, at the distance of about sixty feet, is a similar contrivance, which, instead of a gun, is provided with a receiver, resembling a large mortar, filled with sand. The ball, in passing from the cannon, enters the mouth of this mortar, and causes it to recoil, thus indicating, in the manner before described, the velocity or force with which the shot is projected. You will see at once that two important points are thus ascertained, to wit: the distance which a gun will recoil with a given charge, and the force with which a ball of a given weight can be thrown with a certain quantity of powder. This, it is believed, is the only *dynameter* of the kind in this country; and should you, or any of your readers, visit Washington, is well worthy of a visit.

ASSOCIATION OF AMERICAN GEOLOGISTS.—The Association of American Geologists closed its session at Albany on Tuesday evening, to meet at Washington in May of next year. A number of highly interesting and valuable papers were read during the session, including one, which is spoken of as peculiarly meritorious, by professor RODGERS, the President, on the subject of earthquakes, illustrated by a very large diagram.

Previous to adjournment, Dr. LOCKE, of Cincinnatti was chosen the next President of the Association, and Dr. DAVID DALE OWEN, of Indiana, Secretary.—*Baltimore American.*

ROCKY MOUNTAINS.—Mr. Thompson, the Astronomer of the Hudson Bay Company, reports that he found peaks between latitude 53 and 56 north, more than 26,000 feet above the level of the sea. The latitude mentioned is much north of the United States territory. The height is nearly equal to that of the Himmalaya mountains of Asia.

POETRY.—We find in the *Knickerbocker* the following beautiful lines, from the pen of Lieut. ROBERT E. HOOE:

My life is like the shattered wreck
Cast by the waves upon the shore;
The broken masts, the rifted deck,
Tell of the shipwreck that is o'er.
Yet from these relics of the storm
The mariner his raft will form,
Again to tempt the faithless sea,
While Hope rebuilds no bark for me!

My life is like the blighted oak
That lifts its sear and withered form,
Scathed by the lightning's sudden stroke,
Sternly to meet the coming storm;
Yet round that sapless trunk will twine
The curling tendrils of the vine,
And life and freshness there impart—
Not to the passion-blighted heart!

My life is like a desert rock
In the mid ocean, lone and drear.
Worn by the wild waves' ceaseless shock,
That round its base their surges rear.
Yet there the sea-moss still will cling,
Some flower will find a cleft to spring,
And breathe o'en there a sweet perfume—
For *me* life's flowers no more will bloom!

HYDROGRAPHICAL OFFICE.

WEATHER JOURNAL FOR THE WEEK ENDING SATURDAY, MAY 6, 1843.

Days.		Barometer.	THERMOMETERS. Attach.	Sun.	Rad.	Shade.	W. Bulb.	Dew Pt.	Weather.	Portion cloudy.	Wind.	Force.	Rain, inches.
Monday, 1st,	3 A. M.	29.875	72°	53°	53°	56°	45°	40°	Clear.				
Do.	3 P. M.	29.932	66	82	82	61	49	46	"				
Tuesday, 2d,	3 A. M.	30.248	73	33	-	44	40	40	Cirrus.	.5	SE.		
Do.	3 P. M.	30.286	66	86	82	64	52	43	Rain.	-	Calm.		
Wednesday, 3d,	3 A. M.	30.318	66	52	1	53	49	46	Cum. stratus.	.5	N. NE.		
Do.	3 P. M.	30.306	70	88	73	58	50	49	Clear.	1	Calm.		
Thursday, 4th,	3 A. M.	30.390	64	37	32	40	38	37	Cirrus.	.2	South.		
Do.	3 P. M.	30.356	68	91	103	65	54	48	Cumulus.	.3	Calm.		
Friday, 5th,	3 A. M.	30 347	69	58	51	47	42	38	Clear.	1	NE.	.13	
Do.	3 P. M	30.336	68	100	103	70	59	48	Cirrus strat.	.5	Calm.		
Saturday, 6th,	3 A. M.	30.326	65	50	52	52	46	42	Cirrus.	.7	SE.		
Do.	3 P. M.	30.276	66	85	94	67	60	57	Stratus.				0.235

Maximum variation of the needle May 1, 20 h. 00 m., - - 1° 39′ 21″ .75.
Minimum, " 2, 00 h. 00 m., - - 1° 21′ 47″ .75.
Mean variation for the week, - - - - 1° 32′ 15″ .30.

WASHINGTON.

THURSDAY, MAY 11, 1843.

The SECRETARY OF THE NAVY left Washington, on Saturday morning last, in the steamer Osceola, for Norfolk, intending to proceed thence to his residence on the eastern shore of Virginia, where he will spend a few days. He will probably return in the course of the present month, and soon after start on his northern tour of examination. It is intimated that Judge UPSHUR will be present at the celebration of the completion of Bunker Hill Monument.

On Monday, as we learn from the Norfolk Beacon, the Secretary visited the national vessels lying at the anchorage. The yards of each vessel were manned when the Secretary reached the quarter-deck and when he left, and a salute of seventeen guns fired.

A. THOMAS SMITH, Esq., Chief Clerk of the Navy Department, has been appointed Acting Secretary of the Navy, during the absence of the head of the Department.

The SECRETARY OF WAR has returned to this city from a short visit to Pennsylvania.

EXAMINATION OF MIDSHIPMEN.—The examination of those midshipmen, whose warrants bear date prior to the 1st of January, 1838, will take place at the Naval Asylum, Philadelphia, on Monday, the 22d instant.

The Board will consist of Commodore GEO. C. READ, Captains WM. COMPTON BOLTON, JOHN PERCIVAL, BENJAMIN PAGE, and JOHN GWINN. Professor WILLIAM CHAUVENET, Mathematical Examiner.

All the midshipmen entitled to examination have been notified to attend.

On account of the riots which have of late so frequently occurred among the shipping in Savannah river, the interposition of the General Government has been solicited, and promptly accorded. The revenue cutter *Crawford*, it will be seen, has already been sent thither; and, in addition, the brig *Somers* will shortly sail from Norfolk to Savannah, and be placed at the disposal of the collector of the port.

After performing this service, the *Somers* will form part of the Home Squadron, and proceed on a cruise to the West Indies.

THE SANDWICH ISLANDS.—Advices have been received from that quarter as late as the 8th of March. On the 25th of February, in consequence of demands made by the British officers, which the King could not, or would not, comply with, the islands were conditionally ceded to Queen Victoria. Possession was taken of them the same day by Lord GEORGE PAULET, and commanding H. B. M. ship *Carysfort*, and the British flag hoisted under salutes from the fort and ships.

NAVAL MOVEMENTS.—The frigate *Brandywine* and sloop *St. Louis*, composing the relief squadron destined to the East Indies, are under orders to sail positively by the 20th instant. Commodore DANIEL TURNER, appointed to the command of our squadron on the coast of Brazil, will take passage in the *St. Louis*.

Hon. CALEB CUSHING, FLETCHER WEBSTER, and JOHN TYLER, Jr., Esqrs., (the Mission to China,) it is said, will go out in the *Brandywine*, or join her at Singapore.

It is reported that the steamer *Missouri* now at this yard will join the East India squadron.

The brig *Truxtun*, at Norfolk, is under orders to proceed to Constantinople, for the purpose of bringing home the remains of Commodore PORTER.

Lieut. HUNTER, commanding the steamer *Union*, has been directed to visit all the accessible ports along our seacoast, to allow as many of our citizens as possible an opportunity of examining his vessel and her peculiar mode of construction. What course, whether north or south, he will first take, we have not learned; but, wherever he goes, he will no doubt be cordially welcomed.

The *Levant*, sloop-of-war, Comm'r PAGE, at Norfolk, is destined to the Pacific.

Lieut. LEFROY, R. A., director of the magnetic observatory at Toronto, who is charged by his Government to conduct a magnetic survey in North America, has left to commence his duties. He proposes to keep Monday, July 3, and Friday, July 7, as term days for simultaneous observations, and will be at that time at Yorkfort, on Hudson's Bay.

On the return of Captain Ross from his Southern expedition, he will be despatched immediately to make another attempt to face a northwest passage.

Among the most honorable victories of naval heroes, both European and American, have been those gained in battling with giant nature.

NEW SLOOPS-OF-WAR.—Preparatory orders have been issued to commence building, as early as practicable, a first-class sloop-of-war at each of our navy-yards, viz: Portsmouth, N. H., Charlestown, Brooklyn, Philadelphia, Washington, and Norfolk. Six in all.

NATIONAL OBSERVATORY.—We will present our readers with a handsome view of the front elevation of the building to be erected for the purpose of a "Depot of Charts and Instruments" as soon as it can be prepared, the drawings for which are now in the hands of the engraver. It will be accompanied by a description of the building, and a descriptive list of the instruments.

NAVAL COURT MARTIAL.

The court have been occupied in the examination of witnesses, since the last note we made of the proceedings, Monday, April 17. The evidence is not reported.

Lieut. POOR, Lieut. RING, Lieut. LOCKHART, Mr. MARIN, (late Master of the *Vandalia*,) Lieut. TRAPIER, Quartermaster COLE, Lieut. TILGHMAN, Gunner OWENS, Acting Boatswain LYONS, Master-at-Arms QUINN, Steward GOLDSBOROUGH, Sergeant COULTER, Quartermaster POWELL, privates McDOWELL and ROBERTSON, and Dr. GREEN, have been examined.

The recruiting naval service at New Orleans has been, we learn, very successful this season. Two drafts, numbering over three hundred men, have already been sent to the north, and as many more will no doubt be obtained before the time for closing the rendezvous shall arrive.

Captain THOMAS A. LINTON, appointed to the command of the marine barracks at Gosport, Va., arrived at that station on Wednesday, the 3d instant.

LLEWELLYN JONES, Esq., of New York, has been appointed Naval Storekeeper for our squadron on the coast of Brazil, to reside at Rio Janeiro, in the place of ROBERT C. YATES, Esq., removed.

CHARLES D. BRODIE, Esq., Naval Constructor at Pensacola, has been ordered to the Washington navy-yard.

Commander ADAMS and Lieut. JOHNSTON arrived at Memphis, Tenn., on the 19th ultimo. They are appointed, together with Captain ROSSEAU, as has been before noticed, to make an examination of the harbor of Memphis, and report upon the practicability of establishing at that place a naval depot.

The receiving-ship *Ontario* is to be sent to Norfolk during the summer months.

AMERICAN NAVAL BIOGRAPHY.—Mr. E. H. BUTLER, of Philadelphia, is now publishing in numbers the lives of the Commodores and other Commanders distinguished in the history of our Navy, compiled from the most authentic sources, by JOHN FROST, Professor of Belles Lettres in the High School of Philadelphia. The first number is embellished with portraits of PAUL JONES, DALE, and MURRAY, and with a representation of the action between the Bonhomme Richard and the Serapis.

The whole is to be completed in six monthly parts, at 25 cents each; four copies for $5, or ten copies for $10.

Communicated.

BLASTING ROCKS BY ELECTRICITY.

NEW YORK UNIVERSITY, *May* 4, 1843.

Having read in the Army and Navy Chronicle of the 13th and 20th ultimo, articles descriptive of the recent use of electricity by English engineers for the purpose of blasting rocks, I am induced to send you the following statement of facts regarding the original employment of that fluid for igniting magazines of gunpowder, thinking it may not be generally known by your readers that rock-blasting by electricity is not a late English discovery, (as the uninformed would naturally infer from reading the articles recently published by you on this subject,) but it is purely of American origin.

The first person who made any practical use of electricity for the purpose of igniting large masses of gunpowder was Mr. Moses Shaw, of Boston, Mass. His experiments were made as early as the year 1828. He applied it for the purpose of blasting rocks. An account of his method was communicated to Professor Silliman by the late Dr. Chilton, of this city, and it was published in the American Journal of Sciences and Arts, vol. XVI, 1829. Mr. Shaw at first made use of the ordinary electrical machine, but finding it inconvenient in damp weather, he, by recommendation of Dr. Hare, of Philadelphia, employed the *calarimater*, a form of galvanic battery constructed by Dr. H., in which the plates are so connected together as to act as one pair. Its power of igniting in all weather would extend a distance sufficient to blast rocks with safety. An account of his experiments was published by Dr. H. in the American Journal of Sciences and Arts, vol. XXI, 1831, and again, with additions, in vol. XXVI, 1834; in which latter article Dr. H. recommends a battery of a number of galvanic plates. Since that time, both common and galvanic electricity have been usefully employed by various persons in many parts of *this country* for the purposes of igniting magazines of gunpowder, and for years before the *English engineers* attempted to break up the *Royal George*. Electricity for blasting was employed at *Harlem, Sing Sing, Black Rock, Lockport, Buffalo, and other places*, with perfect success. *In one instance, at Black Rock, no less than thirty blasts were fired at one time, by only one battery.*

I have the honor to be, very respectfully, yours,

SAML. COLT.

SANTA FE TRADERS.—It is stated that, in consequence of information having been received that the Santa Fe traders of the United States are likely to be attacked by a banditti when they pass the Rocky Mountains, Colonel Kearny has detailed an escort of U. S. dragoons, and asked permission of the Mexican Minister at Washington that it may be authorized to accompany the traders through the Mexican territory at Santa Fe.

The above information is correct, so far as it goes; but the permission asked for has not been granted. The instructions given are, that on no consideration must the United States troops cross the boundary line into Mexico.

Correspondence of the Army and Navy Chronicle.

THE LATE COMMODORE PORTER.

CONSTANTINOPLE, *March* 9, 1843.

DEAR SIR: I avail myself of the French packet of to-day to write you a few hurried lines, and to inform you of the death of Commodore DAVID PORTER, resident Minister of the United States at this place, which occurred on the 3d instant at noon, of an inflammation of the *pericardium*. I bring it to your knowledge, knowing that the distinguished services which the deceased rendered to his country, whilst connected with its navy, make his death a subject of deep interest to your readers.

For several years past, Commodore PORTER had suffered much from ill health, and his speech was slightly impaired. He also walked with difficulty, and was consequently much confined to his residence at San Stefano, a village on the sea of Marmora, a few miles distant from Constantinople. His principal society there was composed of the families of his two sisters, Mrs. Brown and Mrs. Heap, in the latter of which is one of his daughters. Latterly his health had been precarious, at times giving hope of improvement, at others inspiring the worst fears, and his death eventually occurred when least expected.

I visited him frequently, as did other American residents in Pera, and I was with him during the closing scene of his eventful life. From the nature of his last illness his breathing was obstructed, but his pains were not very severe. He seemed conscious of his situation until within a few hours of his death; bore his sufferings with fortitude, made no complaint, and departed with quiet resignation to the will of the Creator. Within the few last months of his life he had been frequently visited by the members of the Missionary Board, resident in this place, and the Rev. Wm. Goodell attended him in his last moments.

Of the public life of the deceased it is unnecessary to speak, it being too well known to require it, and his own is identified with some of the brightest pages of his country's history. Of his friendship and the natural kindness of his heart, as well as the most salient traits of his high and noble character, I may make mention from my own personal experience. Those who know him best will long recollect them with admiration, and cherish with the warmest affection the remembrance of the many benefits he conferred upon them. High-minded and loyal himself, he loved frankness and candor in others. To those around him he was a kind friend and protector, and took pleasure in inculcating in others principles of manly virtue and uprightness. He was generosity itself, and though liberal even to imprudence, was never known to expend his means improperly or on unworthy objects! His mind was admirably strong, his thoughts and intentions clear, distinct, and determined. How many persons are now filling creditable stations in society which his advice and influence aided them to attain! As in early life he owed but little to scholastic education, he was decidedly a self-made man, and gained with no other aid than his own arm the distinguished reputation which he held in the navy. His talents have been severally drawn forth by the charges confided to him by the Government, to which he gave continual satisfaction, and his personal bravery has been placed beyond doubt by the many gallant acts of his life.

Ill health, and, it may now be added without fear of wounding the too sensible spirit of the deceased, a feeling of regret which his proud and lofty heart would not acknowledge, for having, in a moment of wounded feelings left the navy, wherein he had gained unfading laurels, where the memory of his glorious deeds will long be honored, and where his best and warmest feelings never ceased to be interested, led him to seek quiet and retirement. His country has been grateful to him for his past services, and he ever spoke of her kindness to him with expressions of thankful acknowledgment. The office of Minister which he held near the Turkish Government provided him with an honorable retreat from more active employment.

But the "gallant PORTER" is now no more. The life which he so often periled to maintain the honor of our country has ended. Prostrated by death is the powerful and energetic mind which made him so effectual a member of the navy, and sustained him through so many thrilling scenes. We now remember Tripoli, the Pacific, the West Indies, Valparaiso, and even the name of the "Essex" with feelings of admiration mingled with grief.

It was his desire that his remains should be interred at San Stefano at the foot of the flag-staff of the legation, which is erected on the bank of the sea, within a few feet of the water's edge. His relations had them encased in a leaden coffin for preservation, and wrapped up in an ensign of the United States, deposited in a temporary vault with the expectation that the Hon. Secretary of the Navy will direct one of the vessels-of-war of the Mediterranean squadron to convey them to a more honorable sepulchre in his native land. If he never expressed this desire himself, it was not that his wishes were opposed to their being removed, but from a too modest appreciation of their value.

On the 6th instant, all the American citizens here and many members of the Diplomatic Corps assisted at his funeral. With heavy and sad hearts we placed his remains in their narrow coffin, and wrapped around it the flag which he had so nobly and gloriously defended on the ocean. Some American seamen, who happened to be here, had the privilege of lowering into his grave him who had been so zealous and effective a defender of their rights and free trade; and with feelings of the deepest sorrow I paid my last duty to my departed friend and relative, whom in life I admired and respected, and whose memory I will honor as long as I live.

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At a meeting of the American residents at Constantinople, convened after the funeral ceremonies at the interment of Commodore DAVID PORTER, late Minister resident of the United States at the Sublime Porte, JOHN P. BROWN, Dragoman of the Legation, having been appointed Chairman, and C. HAMLIN, Secretary, the following resolutions were passed:

Resolved, That in testimony of our respect and of

the high estimation in which we hold the distinguished public services of the deceased, we wear the usual badge of mourning for thirty days.

Resolved, That we tender to the afflicted widow of the deceased the expression of our sympathy in this event, which has not only taken from the public one of its distinguished servants, but from them an honored and cherished relative and friend.

Resolved, That a copy of these resolutions, signed by the chairman and secretary, be presented to the widow of the deceased in America, to other relatives in this Empire, and to the Department of State at Washington.

JOHN P. BROWN, *Chairman.*
C. HAMLIN, *Secretary.*

CONSTANTINOPLE, *March* 6, 1843.

NEW LIFE-BOAT.—A life-boat of novel construction, was exhibited at the Exchange Reading Room, this morning. The boat is 6 feet long, 2 feet wide, 14 inches deep when open, and 3½ inches when shut. It is one of the smallest capacity, calculated only for one person. It weighs 50 pounds, and will carry 500 pounds. It will not sink, though full of water, having two air bags attached to each side. It is provided with two oars, and a signal flag—made with a covering to draw even with the sides, around the person, to shut himself in. It will not easily upset. It is stated that a boat to carry a large number of persons, can be constructed at a much less expense than the common life-boat. It can be put in order in three or four minutes.—*Boston Journal.*

Military Intelligence.

Fort Brooke, Tampa, has been added to the list of chaplain posts.

ADJUTANT GENERAL'S DEPARTMENT.—Brevet Major S. Cooper, Assistant Adjutant General, assigned to duty at the headquarters of the 3d military department, and to report to Major General Gaines, at St. Louis.

Brevet Captain J. H. Prentiss, Assistant Adjutant General, assigned to duty at the headquarters of the 1st military department, to report to Brigadier General Arbuckle, at New Orleans.

ENGINEER CORPS.—Capt. John Sanders, in charge of improvements on the Ohio river. Address, Pittsburgh, Penn.

TOPOGRAPHICAL ENGINEERS.—Captain C. Graham, on survey of the communication from Albemarle sound to the Atlantic ocean. Address, Wilmington, N. C.

Captain G. W. Hughes, on duty in the Bureau.

Captain T. B. Linnard, at Natchitoches, La., in charge of the improvements of Red river.

Lieut. W. H. Emory, attached to the Bureau.

Lieut. J. E. Blake, on duty in Florida under Gen. Worth.

Lieut. L. Sitgreaves, attached to the Bureau.

Every member of the corps is on duty.

1ST ARTILLERY.—Brevet 2d Lieuts. Joseph Stewart and C. L. Kilbourn, relieved from duty at Fort Adams, and assigned to companies in their regiments, where their services will be most needed.

3D ARTILLERY.—Brevet 2d Lieut. R. W. Johnston, transferred to company A, and to duty at Fort Johnston, N. C.

5TH INFANTRY.—2d Lieut. Paul D. Geisse, transferred from the 7th, to take rank next below 2d Lt. Norvell, and assigned to company E.

7TH INFANTRY.—2d Lieut. Henry Little, transferred from the 5th, to take rank next below 2d Lieut. Henshaw, and assigned to Company H.

NAVY.

May. ORDERS.

3—Lieut. A. A. Harwood, ordnance duty.
Lieut. S. F. Hazard, sloop Decatur, Norfolk.
P. Mid. J. A. Doyle, receiving-vessel, Baltimore.
Gunner Thomas Dewey, ordinary, New York.

4—Lieut. C. H. McBlair, leave four months.

5—Lieut. J. J. Forbes, furlough renewed three months.
Boatswain Wm. Hart, ordinary, Boston.
Carpenter Loman Smith, sloop Vandalia, *vice* John Cahill, relieved on account of unfitness for sea service, and ordered back to receiving-ship at Norfolk.

6—Lieut. J. J. Boyle and Surgeon J. F. Brooke, leave three months each, having returned by permission from the Mediterranean.
Lieut. James Noble, rendezvous, Charleston.

8—Lieut. C. C. Barton, sloop Levant, Norfolk.
Lieut. J. H. Adams, sloop Decatur, Norfolk.
Lieut. W. A. Jones, rec. ship, New Orleans.
Lieut. J. H. Sherburne, leave three months, having returned from coast of Brazil, on sick ticket.
Surgeon D. Egbert, Baltimore station.
Lieuts. J. C. Walsh, C. Steedman, J. Humphreys, and A. B. Davis, coast survey under Comm'r Gedney.
P. Mid. M. Woodhull and D. Ammen, coast survey under Lieut. Blake.
P. Mid. C. Sinkler, rec. vessel. Philadelphia.
Gunner Thomas Lewis, sloop Decatur, Norfolk.
Carpenter J. M. Webb, ordinary, New York.

9—Lieut. G. M. Bache, P. Mid. F. S. Haggerty, R. N. Stembel, and A. H. Jenkins, coast survey, under Comm'r Gedney.
Lieuts. C. H. Davis, J. B. Dale, S. P. Lee, P. Mid. J. N. Maffitt and S. Bent, coast survey, under Lieut. G. S. Blake.
P. Mid. J. B. Carter, depot of charts, &c.

May. APPOINTMENTS.

3—Charles B. Oliver, Acting Master's Mate.
Edmund F. Olmstead, do.
James H. Polly, do.

May. APPOINTMENT REVOKED.

5—Henry R. Blakiston, as Acting Master's Mate.

Naval Intelligence.

U. S. VESSELS OF WAR REPORTED.

Brig *Somers*, Lieut. Com't West, arrived at Norfolk, on the 3d instant, from New York. The usual salutes were exchanged between the brig and the flagship of Commodore Kennedy.

Officers of the *Somers:* Lieut. Com'dt John W. West; Lieut. (temporarily) John C. Carter; Acting Master J. R. M. Mullany; Purser H. M. Hieskell; Assistant Surgeon J. J. Brownlee; Midshipmen, Geo. W. Clark, W. H. Hudson, J. W. A. Nicholson; Master's Mate John Ritter.

EAST INDIA SQUADRON.—Ship *Boston*, Commander Long, left Macao on the 27th September for the Pacific, intending to visit the Society, Marquesas, and Sandwich Islands, and the coast of Mexico, on her route homewards. Proceeded out the eastward or Lema passage, and attempted the passage into the Pacific by the Bashee straits; but in consequence of heavy N. E. winds, and the barometer indicating a typhoon, on the 1st October bore up for the southern passage round New Holland; experienced a very severe gale, that continued three days, during which

the fore and main-topsails were badly split, and the foresail, though reefed, was blown to pieces. Arrived at Anjier on the 25th October, and after filling up wood and water, sailed again on the 27th for the Pacific. Arrived at Sydney, New South Wales, for stores and supplies, on the 29th November; sailed thence about the 20th December, and arrived at Tahiti on the 21st January, in 36 days.

The French protectorate flag was flying at Tahiti, the Society Islands having been placed under the protection of the King of the French, by an agreement between Queen Pomare and Admiral Du Petit Thouars.

The *Boston* left Tahiti on the 26th January, and arrived at Honolulu on the 13th February. At the request of several American merchants, Commander Long consented to remain at the Sandwich Islands for the protection of our citizens and their property during the pending difficulties with the British Government. He was still at Honolulu on the 8th of March, but would sail in a few days for Valparaiso, his instructions requiring him to leave the latter port about the 1st April for Rio Janeiro, where he expected to meet Commodore Kearny by the middle of May.

List of officers of the *Boston:*

Commander, John Collings Long; Lieutenants, Timothy G. Benham, Henry Walke, John F. Mercer, Isaac N. Brown; Acting Surgeon, Robert J. Dodd; Assistant Surgon, John H. Wright; Acting Purser, N. G. Rogers; Acting Master, Reed Werden; Midshipmen, Charles Dyer, Francis Gregory, Reuben Harris, Riegart B. Lowry, James B. McCawley, Stephen B. Quackenbush; Master's Mate, John M. Shaw; Captain's Clerk, S. Henriques; Boastwain, J. R. Fox; Gunner, Elisha Whitton; Sailmaker, George T. Lozier.

List of officers on board the frigate *Constellation*, at sea, on the 1st January, 1843:

Commodore, Lawrence Kearny; Lieuts., Henry Pinkney, Theodorus Bailey, Hillary H. Rhodes, M. G. L. Claiborne, James L. Parker; Fleet Surgeon, Stephen Rapalje; Assistant Surgeon, J. W. B. Greenhow; Purser, Nathaniel Wilson; Acting Master, Napoleon Collins; Professor, Thomas H. Perry; Lieut. Marines, John G. Reynolds; Commodore's Secretary, Butler Maury; Midshipmen, J. C. Beaumont, Homer C. Blake, Garrit V. Denniston, Earl English, B. L. Henderson, John Matthews, Robert M. McArann, William G. Temple, Charles Waddell, John Walcutt, James Wiley, James Wilcoxson; Boatswain, John Munro; Gunner, Daniel James; Carpenter, David Marple; Sailmaker, John Heckle.

Mediterranean Squadron.—The *Delaware*, 74, Capt. McCauley, bearing the broad pendant of Commodore Morris, arrived at Gibraltar on the 9th April, from Rio Janeiro.

Pacific Squadron.—Frigate *United States*, Capt. Armstrong, bearing the broad pendant of Commodore Jones, arrived at Oahu, Sandwich Islands, on the 4th December, and sailed again on the 7th. Only 9 on the sick list.

Brazil Squadron.—Frigate *Columbia*, Captain E. R. Shubrick, and schooner *Enterprise*, Commander J. P. Wilson, were at Montevideo on the 25th Feb.

Brig *Chipola*, Commander Gardner, sailed from Rio Janeiro, March 8, for Mozambique channel, to look after the wreck of the sloop *Concord*.

African Squadron.—Sloop *Saratoga*, Commander J. Tatnall, arrived at New York, on Saturday last, from Portsmouth, N. H.

Ship *Vandalia*, Commander McCluney, bound to Chagres, dropped down to Hampton Roads on Saturday afternoon. Commodore Dallas, Mr. Brown, U. S. Commissioner to the Sandwich Islands, and other gentlemen going out in the Vandalia, will leave here this morning in the steamer *Star*, to join said ship, when she will immediately proceed to sea.—*Norfolk Beacon, 8th instant.*

Revenue Cutter *Jefferson*, Captain Nones, arrived at New York on the 3d instant from Charleston.

PASSENGERS.

Charleston, *May* 1, per steamer *Governor Dudley*, from Wilmington, Lieut. J. D. Kurtz, of the army, and lady. *May* 2, per steamer *Beaufort District*, from Savannah, General A. Eustis, of the army, and lady.

Savannah, *April* 30, per steamer *Beaufort District*, from Charleston, Paym'tr E. Van Ness, of the army. *May* 3, per brig *Philura*, from New York, Lieut. J. Beardsley, of the army, and lady.

LETTERS ADVERTISED.

Norfolk, *May* 1, 1843.

Navy.—Commodore J. B. Nicolson; Lieuts. John Pope, 3, A. H. Foot, George Minor, E. Middleton, L. Stoddard; Surgeon J. C. Spencer; Purser H. W. Greene; Passed Midshipmen W. B. Beverley, S. D. Lavallette, 2, P. U. Murphey, W. Reid; Midshipmen, W. B. Browne, 3, Joseph Fry, R. H. Getty, S. A. Miller, Julian Myers, J. H. Nones, C. W. Place, J. Spotts, S. Wilcox, P. Wager, 2.

May. ARRIVALS AT WASHINGTON.

4—Lieut. L. B. Northrop, dragoons, Galabrun's.
Lieut. D. T. Chandler, 3d infantry, Georgetown.
5—Col. B. K. Pierce, 1st artillery.
Ass't Sur. Wm. Levely, army, Gadsby's.

Marriage.

In Norfolk, on the 2d instant, Lieut. GEORGE TERRY SINCLAIR, of the U. S. navy, to MARY, eldest daughter of William H. Thompson, Esq., of that place.

Death.

At Northampton, Mass., on the 27th ultimo, Mrs. Eliza H. Watson, aged 40, wife of A. E. Watson, Esq., Purser U. S. navy.